



Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Third Semester B.Tech Degree Examination December 2020 (2019 Scheme)

**Course Code: CST205****Course Name: OBJECT ORIENTED PROGRAMMING USING JAVA**

Max. Marks: 100

Duration: 3 Hours

**PART A***Answer all questions. Each question carries 3 marks*

Marks

- 1 Discuss the concept of classes and objects in Java language using an example of a 'student' object in a Student management application. (3)
- 2 What are the advantages of using UML? Sketch the UML class diagram for an entity 'book'. (3)
- 3 List out any three literal types in Java .Give examples for each. (3)
- 4 Differentiate between Arrays and Vector class in Java. (3)
- 5 How do you create and import a package in Java? (3)
- 6 Write an example of implementing an interface in Java. (3)
- 7 Illustrate the working of any two methods of String class that compare strings. (3)
- 8 List and explain any three methods defined by the 'List' interface in Java. (3)
- 9 Point out the use of a Swing Layout Manager. Explain any one type. (3)
- 10 Compare any three types of Swing button classes . (3)

**PART B***Answer any one full question from each module. Each question carries 14 marks***Module 1**

- 11 a) Bring out the difference between function oriented software design approach and object oriented software design approach using the example of an automated fire alarm system. (4)
- b) Describe buzzwords of Java that defines the Java programming language. (10)
- 12 a) Compare and contrast Java Applets and Java Application. (4)
- b) Illustrate the Java Programming and Runtime Environment. Explain the roles of each component of it while compiling and executing a java program. (10)

**Module 2**

- 13 a) Discuss about bitwise, relational and conditional operators in Java with examples and compare its precedence. (6)
- b) Demonstrate the role of 'super' keyword in the context of inheritance in Java with appropriate examples. (8)
- 14 a) Point out the significance of 'this' keyword with an example. (4)
- b) Write a java program to show the significance of method overriding in achieving run time polymorphism. Discuss difference between method overriding and method overloading. (10)

**Module 3**

- 15 a) Write a Java program to copy the contents of one file to another file using FileInputStream and FileOutputStream classes. (5)
- b) Describe various methods of reading data from the keyword with appropriate examples in Java. (9)
- 16 a) Differentiate between checked and unchecked exceptions in Java with examples. (4)
- b) Demonstrate the significance of the keywords 'try', 'catch', 'finally', 'throw' and 'throws' in exception handling of Java with appropriate examples. (10)

**Module 4**

- 17 a) Discuss the event handling mechanism in Java using the Delegation Event Model? (8)
- b) How mouse events are handled in Java? Give suitable Java source code. (6)
- 18 a) Discuss the methods of creating threads in Java using appropriate examples (8)
- b) Write a Java program that creates multiple child threads to print odd and even numbers from 50-100. (6)

**Module 5**

- 19 a) What is use of Swing package in java? Discuss any two features. (6)
- b) Write a program to illustrate the use of JFrame, JTextField and JLabel. (8)
- 20 a) Write sample code to establish database connectivity in Java. Discuss the various steps involved. (10)
- b) Write Java code to demonstrate the execution of create and insert queries using JDBC. (4)

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